

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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SERIAL NO.: Not Assigned Yet
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FOR: IRRIGATION SYSTEM AND TIP WITH DEBRIDER
EXAMINER: A. Nguyen
ART UNIT: 3763

BOX PATENT APPLICATION
Commissioner for Patents
Washington, DC 20231

PRELIMINARY AMENDMENT

Sir:

Please amend the above-entitled application as follows:

Related Application

This application is a divisional of application Serial No. 08/907,348 filed August 6, 1997.

Claims

Cancel claims 1-19 and 21-27.

Add claims 29-47.

29. An arthroscopically insertable device for arthroscopic therapeutic treatment of a joint to remove irritants from the joint comprising:
a shaft having a proximal end and a distal end, the shaft being relatively rigid for most of its length;
a debridement tip mounted to the distal end of the shaft, the debridement

tip being more flexible than the relatively rigid portion of the shaft and having a flexible debridement surface;

the rigidity of the shaft being sufficient to enable manipulation of the shaft to bring the debridement tip to bear against selected internal regions of a joint;

the debridement tip and debridement surface having sufficient abrasion characteristics to enable arthroscopic debridement of selected regions of a joint and being sufficiently resilient and flexible as to debride said regions with reduced trauma.

30. A device as defined in claim 29 further comprising a lumen extending through the shaft and communicating with at least one outlet emission in the debridement tip, the outlet and lumen enabling emission of pressurized liquid streams at a sufficient velocity and impact force to facilitate debridement.

31. An arthroscopically insertable device as defined in claim 30 further comprising a plurality of said emission outlets.

32. An arthroscopically insertable device as defined in claim 31 wherein at least one of said emission outlets is oriented to direct emitted liquid in a generally distal direction and at least of the emission outlets is oriented to direct emitted liquid in a radial direction.

33. A device as defined in claim 29 further comprising:
the debridement tip being molded from a polymer to include a portion having a cross-sectional dimension that is smaller than the cross-sectional dimension of the shaft; and

a plurality of bristles protruding laterally from said surface of the debridement tip, the outer ends of the bristles defining the debridement surface, the ends of the bristles extending not substantially beyond the cross-sectional dimension of the shaft whereby the cross-sectional profile of the debridement tip and the shaft are of

sufficiently small cross-sectional dimensions to enable arthroscopic insertion of the tip into a joint.

34. An arthroscopically insertable device as defined in claim 33 further comprising at least one emission outlet in the debridement tip that is disposed between the most proximal and most distal of the bristles and is oriented to direct an emitted stream in a radial direction.

35. A device as defined in claim 33 wherein the bristles are molded integrally with the tip.

36. A device as defined in claim 33 further comprising:
the tip being molded to include an internal chamber that communicates with the lumen, the outlets being formed in the tip to communicate with the chamber.

37. A device as defined in claim 36 further comprising:
the shaft having a reduced diameter at its distal end, the proximal end of the tip defining a socket receptive to the reduced diameter distal tip of the shaft, the outer dimensions of the proximal end of the tip and the distal end of the shaft being substantially the same to define a relatively smooth transition between the external surfaces of the shaft and the tip.

38. A device as defined in claim 37 further comprising:
at least one stiffening finger extending from the distal end of the shaft, the finger being contained within the chamber and being dimensioned and form to control the degree of flexibility for the distal portion of the debridement tip.

39. A device as defined in claim 33 wherein the tip has a pair of flat sides with the bristles extending from each of the flat sides, the flat sides defining a thin portion of

the tip adapted for insertion into small crevices.

40. A device as defined in claim 33 further comprising:
the bristles extending from at least one surface of the tip that is disposed radially inwardly of the more proximal portion of the tip.

41. An arthroscopically insertable device as defined in claim 29 wherein the shaft has an outer sleeve formed integrally with and from the same material as the debrider and a stiffening tube is disposed within the sleeve.

42. An arthroscopically insertable device as defined in claim 29 wherein the debriding surface does not extend substantially beyond the radial dimensions defined by the shaft.

43. An arthroscopically insertable device as defined in claim 42 further comprising the debrider having a recessed surface from which the bristles extend.

44. An arthroscopically insertable device as defined in claim 42 wherein the debriding surface of the debrider does not extend radially beyond the transverse cross-sectional dimension of the shaft more than about 0.16 inch.

45. An arthroscopically insertable device as defined in claim 44 wherein the shaft has a maximum outer diameter of approximately 0.35 inch.

46. An arthroscopically insertable device as defined in claim 29 further comprising a knob mounted to the shaft, the connector being constructed to be rotatable with respect to the handpiece whereby manipulation of the knob may enable orientation of the emission outlet and the debrider to be changed without changing the

orientation of the handpiece.

47. An arthroscopically insertable device as defined in claim 29 wherein the juncture of the debrider and the shaft is substantially smooth to facilitate entry and removal of the tip from the joint.

REMARKS

This application is being filed as a divisional of application Serial No. 08/907,348 filed August 6, 1997. In order to continue prosecution of the subject matter of claims 34-52 of that prior application which were withdrawn from consideration. The withdrawn claims 34-52 are identically presented as claims 29-47 in this preliminary amendment.

Respectfully submitted,



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